Why We Disagree About Climate Change

Mike Hulme
Professor of Climate Change
School of Environmental Sciences
University of East Anglia, Norwich UK

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Climate change is a pivotal issue for Australia ... [it] is real and it is caused to a significant extent by human activity.

We've had huge climate changes in the past ... to think that the "very slight" variations measured today are a result of human activity is wrong.

... hope that humanity might act to save itself from a climatic catastrophe seems to be draining away.

On the balance of probabilities, the failure of our generation on climate change ... would lead to consequences that would haunt humanity until the end of time.

These are not times for blame or accusation. There is a task ahead of all of us to address the climatic outcomes of our avarice and sloth.
What scientists have concluded ...

1990 ... ‘Global temperature has increased by between 0.3º and 0.6ºC over the last hundred years ... broadly consistent with predictions of climate models, but ... also of the same magnitude as natural climate variability’

2007 ... ‘Most of the observed increase in global average temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations’

1990 ... Projections of global sea-level rise to 2100 in the range 18 to 110 cm

2007 ... Projections of global sea-level rise to 2100 in the range 18 to 59 cm, plus an unknown contribution from accelerated discharge from ice sheets
Number of papers with ‘climate change’ in article keywords or abstract in ISI Web of Science

Source: Aspinall, R. 2010
And led to controversy ...
How the carbon markets have performed ...
How language has changed ...

Source: Brigitte Nerlich, University of Nottingham
How climate change has been written...
How religions have responded ...
How the media have reported ...

- G8 Summit Gleneagles
- IPCC 4th Assessment
- Australian Garnaut report
- Climategate & COP15

2004-2011 World Newspaper Coverage of Climate Change or Global Warming

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How the public have thought ...

Proportion of the US adult population in the “Six Americas”: 2008 and 2010

Source: Tony Leiserowitz, 2010, Yale University
From Berlin to Cancun (via ...)
How carbon emissions have risen ...
My two questions ....

Why has climate change become ‘the mother of all issues’?

Why has climate change seemingly been such a difficult phenomenon to comprehend and tackle?
The idea of framing

Frames are deliberate ways of structuring complex issues which lend greater importance to certain considerations, responsibilities and solutions over others.

‘Gun control’ or ‘gun safety’?

‘Frankenfood’ or ‘food biotechnology’?
Framing climate change

1 Climate change as ... market failure

2 Climate change as ... technological hazard

3 Climate change as ... global injustice

4 Climate change as ... overconsumption

5 Climate change as ... mostly natural

6 Climate change as ... planetary ‘tipping point’
1 Climate change as ... market failure

“Climate change is the greatest example of market failure we have ever seen”

“I'm determined to price carbon ... the time is right and the time is now”

Julia Gillard, February 2011

“Climate change is a business opportunity. The carbon market is the key. A well functioning and robust market with a long-term price signal is essential to redirect investments towards a climate-friendly path.”

Connie Hedegaard, September, 2009
Climate change as a ‘manufactured risk’, a risk created by a growing humanity and its inability to understand the consequences of new technologies

cf. asbestos, nuclear waste, ozone depletion

“Humanity can solve the carbon and climate problem in the first half of this century simply by scaling up already known technology”

Robert Socolow and Stephen Pacala, 2004
3 Climate change as ... global injustice

“Climate change is a direct result of the economic domination of Northern interests and transnational corporations”

First advocated in 1990 by Aubrey Meyer
4 Climate change as ... overconsumption

\[ I = P \times A \times T \]

“The easy compatibility between economic growth and preventing climate change is an illusion”

“Every £4 spent on family planning saves one tonne of CO2”
“Our planet has been a warm wet greenhouse planet for 80% of the time - we've had huge climate changes in the past. To think that the "very slight" variations measured today are a result of human activity is wrong”

Ian Plimer, ‘Heaven and Earth’, 12 November 2009
6 Climate change as ... planetary ‘tipping point’

“We have a window of only 10 to 15 years to avoid crossing catastrophic tipping points”

Tony Blair, October 2006
Framing and ‘solving’ climate change

1. Market failure ... price carbon and trade
2. Technological hazard ... clean energy technology
3. Global injustice ... contraction and convergence
4. Overconsumption ... prosperity without growth
5. Natural ... adapt, adapt, adapt
6. ‘Tipping points’ ... climate engineering
Why different framings?

These framings engage with different worldviews ... our different beliefs, values and attitudes
So, back to my two questions ....

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We've had huge climate changes in the past... To think that the "very slight" variations measured today are a result of human activity is wrong.

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Whose voice?
And so it matters who I am

- Saturated in English culture
- Trained as an academic geographer
- A critical realist in my epistemology
- A practising Christian
- A member of the British Labour Party

What prior commitments – worldviews, stories, beliefs, values - do Julia Gillard, Ian Plimer, Tim Flannery, Ross Garnaut and Patrick Dodson bring to climate change?

And what prior commitments do YOU bring?
Why we disagree about climate change

“Those holding different value perspectives may see in the huge and diverse body of scientific information relevant to climate change, different facts, theories and hypothesis relevant to and consistent with their own normative frameworks”

Sarewitz (2004)

“Culture is prior to facts in the cognitive sense that what citizens believe about the empirical consequences of [certain problems or] policies derives from their cultural worldviews”

Kahan and Braman (2006)
Cultures of knowing

Scientific rationalism

“Every society needs a cohort of intellectuals to check the dominance of a single perspective when its ideological hand becomes too heavy”
Cultures of knowing

Environmental sciences

Creative arts & professions

Philosophy & religion

Social sciences

Technical data and models

Frames, mental models, communication channels

Inspiration, motivation

Worldviews, values, meaning

What truths do the four cultures offer?

Science: e.g. radiative forcing of different gases

Social science: e.g. cultural filters of risk cognition

Creative arts: e.g. aesthetics and future imaginaries

Philosophy & religion: e.g. views of nature and humanity
Pluralism

One view of pluralism

Another view of pluralism

Fatalists

Hierarchists

Egalitarians

Individualists
Polycentrism

“... many analysts have presumed that an enforceable global agreement is the only way to address the threat of climate change ... it would be better to self-consciously adopt a polycentric approach ... in order to ... to encourage experimentation and learning from diverse policies adopted at multiple scales”  Elinor Orstom, 2010